

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) An apparatus, comprising:
multiple antennas for connecting to receiver chains and at least one transmitter chain; and
a switch adapted to couple each receiver chain to a selected individual antenna during reception and the transmitter chain to a selected individual antenna during transmission so that each receiver chain is coupled to a different one of said antennas, said switch comprising:
a first sub-switch adapted to couple a first selected antenna to a first receiver chain creating a first signal path,
a second sub-switch adapted to couple a second selected antenna to a second receiver chain creating a second signal path, and
a third sub-switch adapted to couple a selected antenna to the transmitter chain creating a third signal path.
2. (Currently Amended) The apparatus according to Claim 1, wherein each individual antenna ~~the antennas~~ to be coupled by said switch to each ~~of said~~ receiver chain ~~chains~~ is to be selected according to a predetermined criterion.
3. (Currently Amended) The apparatus according to Claim 1, further including:
a combiner to combine ~~wherein~~ outputs of said receiver chains ~~are to be combined~~ to form a combined output.
4. (Currently Amended) The apparatus according to Claim 1, wherein the first and second sub-switch each is adapted to be coupled to at least two antennas and the third sub-switch is adapted to be coupled to all antennas.

5. (Previously Presented) The apparatus according to Claim 4, wherein the first and second sub-switch each is adapted to be coupled to all antennas.

6. (Previously Presented) The apparatus according to Claim 4, wherein the first and second sub-switch each is adapted to be coupled to all except one of the antennas.

7. (Previously Presented) The apparatus according to Claim 8, wherein the first sub-switch is adapted to be coupled to all antennas and the second sub-switch is adapted to be coupled to two antennas.

8. (Currently Amended) The apparatus according to Claim 1, wherein the third sub-switch is adapted to be coupled to ~~[[a]]~~ the transmitter chain, ~~[[a]]~~ the first receiver chain and said first sub-switch to couple such that the first sub-switch is coupled to said first receiver chain during reception and said transmitter chain during transmission through said third sub-switch, and wherein the first, second and third signal path each includes fewer than or equal to two of the first, second or third sub-switches.

9. (Previously Presented) The apparatus according to Claim 8, wherein the first sub-switch is adapted to be coupled to all antennas and the second sub-switch is adapted to be coupled to all except one of the antennas.

10. (Previously Presented) The apparatus according to Claim 1, wherein said switch further comprises:

a fourth sub-switch adapted to couple a third selected antenna to a third receiver chain.

11. (Currently Amended) A system comprising:

N antennas for connecting to at least R receiver chains R being less than N; and

a switch adapted to couple each of said receiver chains to a selected individual antenna so

that each receiver chain is coupled to a different one of said antennas, said switch comprising:

a first sub-switch adapted to be coupled to (N-T) antennas T being less than R[[]], which first sub-switch is adapted to couple a first antenna selected from the (N-T) antennas to (R-T) receiver chains,
a second sub-switch adapted to be coupled to N antennas, and
a third sub-switch adapted to be coupled to the second sub-switch to couple T antennas selected from N antennas to at least T receiver chains.

12. (Previously Presented) The system according to Claim 11, further comprising:
a combiner adapted to receive signals from said receiver chains and combine said signals into a combined signal.

13. (Previously Presented) The system according to Claim 12, further comprising:
a demodulator/decoder adapted to receive said combined signal from said combiner and perform at least one of demodulation and decoding of said combined signal.

14. (Currently Amended) The system according to Claim 11, wherein [[the]] each individual antennas antenna to be coupled by said switch to each of said receiver chains [[are]] is to be selected according to a predetermined criterion.

15. (Previously Presented) The system according to Claim 11, wherein each sub-switch is adapted to be coupled to at least two antennas.

16. (Previously Presented) The system according to Claim 11, wherein the third sub-switch is adapted to be coupled to a transmitter chain such that said second sub-switch is coupled to a receiver chain or said transmitter chain through said third sub-switch.

17. (Cancelled)

18. (Previously Presented) The system according to Claim 11, further comprising:

a second transceiver adapted to communicate with a first transceiver, said first transceiver comprising said antennas, said receiver chains, and said switch, said second transceiver lacking antenna diversity, wherein said first transceiver is adapted to transmit a signal to said second transceiver at a data rate that compensates for the second transceiver's lack of antenna diversity.

19. (Currently Amended) A method, comprising:

determining at least first and second subsets of antennas from out of a plurality of antennas;

selecting [[an]] a first reception antenna in the first subset and a second reception antenna in the second [[each]] subset using a predetermined criterion;

selecting a transmission antenna in at least one of the first or second subset using a predetermined criterion;

switching signals from [[a]] the first selected reception antenna to a first receiver chain with a first sub-switch;

switching signals from [[a]] the second selected reception antenna to a second receiver chain with a second sub-switch; and

switching signals from [[a]] the selected transmission antenna to a transmitter chain with a third sub-switch, each individual receiver chain receiving a different one of said signals from said selected individual antenna antennas, wherein each receiver chain may only receive signals from the determined subset of said plurality of antennas.

20. (Original) The method according to Claim 19, further comprising:

combining signals processed by said receiver chains according to a diversity combining technique.

21. (Original) The method according to Claim 19, wherein each receiver chain may receive signals from any one of said plurality of antennas.

22. (Original) The method according to Claim 19, wherein each receiver chain may receive signals from a subset of said plurality antennas consisting of all except one of said plurality of antennas.

23. (Currently Amended) The method according to Claim 19, further comprising:
switching ~~[[a]]~~ the transmitter chain to be connected to any one of said plurality of antennas.

24. (Previously Presented) The method according to Claim 23, further comprising:
adjusting a data rate of a signal transmitted by said transmitter chain to compensate for a lack of diversity at a remote receiver.

25. (Currently Amended) A machine-readable medium that provides instructions, which when executed by a computing platform, cause said computing platform to perform operations comprising a method of:

determining at least first and second subsets of antennas out of a plurality of antennas;

selecting a first reception antenna in the first subset and a second reception ~~[[an]]~~ antenna in the second ~~[[each]]~~ subset using a predetermined criterion;

selecting a transmission antenna in at least one of the first or second subset using a predetermined criterion;

switching signals from ~~[[a]]~~ the first selected reception antenna to a first receiver chain with a first sub-switch;

switching signals from ~~[[a]]~~ the second selected reception antenna to a second receiver chain with a second sub-switch; and

switching signals from ~~[[a]]~~ the selected transmission antenna to a transmitter chain with a third sub-switch, each individual receiver chain receiving a different one of said signals from said selected individual antenna ~~antennas~~, wherein each receiver chain may only receive signals from the determined subset of said plurality of antennas.

26. (Original) The machine-readable medium according to Claim 25, further comprising instructions, which when executed by a computing platform, cause said computing platform to perform operations further comprising:

combining signals processed by said receiver chains according to a diversity combining technique.

27. (Original) The machine-readable medium according to Claim 25, wherein each receiver chain may receive signals from any one of said plurality of antennas.

28. (Original) The machine-readable medium according to Claim 25, wherein each receiver chain may receive signals from a subset of said plurality antennas consisting of all except one of said plurality of antennas.

29. (Currently Amended) The machine-readable medium according to Claim 25, further comprising instructions, which when executed by a computing platform, cause said computing platform to perform operations further comprising:

switching ~~[[a]]~~ the transmitter chain to be connected to any one of said plurality of antennas.

30. (Previously Presented) The machine-readable medium according to Claim 29, further comprising instructions, which when executed by a computing platform, cause said computing platform to perform operations further comprising:

adjusting a data rate of a signal transmitted using said transmitter chain to compensate for a lack of diversity at a remote receiver.

31-34. (Cancelled)

35. (New) An apparatus, comprising:

multiple antennas to connect to receiver chains and at least one transmission chain;

a switch which selects individual antennas and connects each selected individual antenna to a respective individual receiver chain during reception and to the transmission chain during transmission, the antennas connected to the receiver chains being physically different from one another; and

a combiner coupled to the receiver chains to receive the reception signals from each individual antenna via the respective individual receiver chain and combine the received reception signals into a combined reception signal.

36. (New) The apparatus according to claim 35, further including first and second predetermined subsets of antennas and wherein the switch includes:

a first sub-switch, operationally coupled between the first subset and a first receiver chain, which first sub-switch connects a first individual antenna selected from the first subset of antennas to the first receiver chain;

a second sub-switch, operationally coupled between the second subset and a second receiver chain, which second sub-switch connects a second individual antenna selected from the second subset of antennas to the second receiver chain; and

a third sub-switch, operationally coupled between the transmission chain and at least one of the first or second subset, which third sub-switch connects an individual transmission antenna selected from at least first or second subset to the transmission chain.

37. (New) The apparatus according to claim 36, wherein the third sub-switch is further operationally coupled between the second sub-switch and the second reception chain, to connect, via the second sub-switch, the second antenna to the second reception chain during reception and the transmission antenna to the transmission chain during transmission.